

ABSTRACT

An optical element comprising: a polarizing element (A), separating incident light into polarization to then emit light, and made of a cholesteric liquid crystal, wherein the polarizing element (A) has a distortion rate with respect to emitting light to incident light in the normal direction of 0.5 or more and a distortion rate with respect to emitting light to incident light at an angle inclined from the normal direction by 60 degrees or more of 0.2 or less, the polarizing element (A) has a function increasing a linearly polarized light component of emitting light as incidence angle is larger; a 1/2 wavelength plate (B); a retardation layer (C) giving almost zero retardation to incident light in the front direction (normal direction) and giving a retardation to incident light in a direction inclined from the normal direction; and a 1/4 wavelength plate (D); being arranged in this order, and further a linearly polarized light reflection polarizer (E), transmitting linearly polarized light with one polarization axis and selectively reflecting linearly polarized light with the other polarization axis perpendicular to the one polarization axis, is arranged on the 1/4 wavelength plate (D) so that the transmission axis of the linearly polarized light reflection polarizer (E) and an axis of the transmitted light, which is transmitted through the polarizing element (A) to the 1/4 wavelength plate (D) in this order, are the same direction. The optical element is capable of condensation and collimation of incident light from a light source and capable of suppressing transmission of light in an arbitrary direction.